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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/768,962	01/30/2004	Vivek Nautiyal	02-IND-139	4549
23990	7590	01/09/2006	EXAMINER ZWEIZIG, JEFFERY SHAWN	
DOCKET CLERK P.O. DRAWER 800889 DALLAS, TX 75380			ART UNIT 2816	PAPER NUMBER

DATE MAILED: 01/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/768,962	NAUTIYAL ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Jeffrey S. Zweizig	2816	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 19 December 2005.  
 2a) This action is FINAL.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-20 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-4,6-10 and 12-20 is/are rejected.  
 7) Claim(s) 5 and 11 is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 30 January 2004 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                     | Paper No(s)/Mail Date. _____ .  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|  | 6) <input type="checkbox"/> Other: _____ .                                  |

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-4, 6-10 and 12-20 remain rejected under 35 U.S.C. 102(b) as being anticipated by Prater (USPN 5,574,633).

Figs. 2 and 3 disclose a plurality of signal lines 40/n12 wherein a plurality of circuits as shown in Fig. 3 correspond to each signal line n12 as shown in Fig. 2. For example, the source portion 40 corresponds to the load portion 312 of the signal line 40/312. Further disclosed is an intermediate floating virtual source/sink 36, a plurality of source portions 40, a plurality of load portions n12 and a charge redistribution circuit (n30, n14 & all of Fig. 3) as recited in claim 1. Component 48 generates the recited idle period.

Line 36 is seen as a charge storage element, a capacitor or a floating conductor as recited in claims 2, 4 and 6.

Fig. 3 is the transition detector including tri-state drives 56/58 and control switch 54/n30 as recited in claim 3. The first output connects to the A/B inputs of the tri-state drivers 56/58. The second output simultaneously enables the drivers at SEL and enables the switches at 54.

Claims 7-10 and 12 are anticipated for the reasons above.

The circuit performs the methods recited in claims 13-20. Furthermore, Fig. 3 shows an element 48 for delaying and an element 50 for XORing as recited in claim 17.

***Response to Amendments and Arguments***

3. Applicant argues that component 48 does not generate an idol period and appears to be simple register. Perhaps that part of the rejection was poorly worded. It may have been more accurate to describe component 48 as generating idol period selections in conjunction with the three control signals shown in Fig. 3. Nevertheless, component 48 is at least responsible for determining which idol period transitions are to occur during phases 1 and 2 as shown in Fig. 4. Component 48 determines that transitioning load portion signal lines will connect to the virtual source/sink during idol and that non-transitioning load portion signal lines will not connect to the virtual source/sink during idol. Component 48 is not simply a register but, along with XOR 50, forms the heart of the idol period transition detector in much the same way as the circuit illustrated in Applicant's Fig. 6.

Applicant argues that Prater describes that prior to a high-to-low transition, "transistor n25 of the respective pad driver n14 will be inactive, and transistor n27 of the respective pad driver n14 will be active. Signal n12 and I/O pad n13 will thus be driven to a logical ZERO during phase 3." (col. 9, lines 46-40). As such, signal 312 is driven to ground instead of connected to charge sharing circuit 36.

Examiner does not see the point of that argument. That quote is clearly describing the circuit's function during phase three, which is after the load portion signal lines have been released from the virtual source/sink (i.e. after the idol period).

Finally, Applicant argues that the rejection to claims 2, 4 and 6 is a "conclusory statement". Claim 2 further defines the virtual source/sink as a charge storage element. Claim 4 further defines the charge storage element as a capacitor. Claim 6 further defines the capacitor as a floating conductor. Conductor 36 shown in Fig. 2 is not in any way referenced and is indisputably a floating conductor, which is inherently a capacitor, which is inherently a charge storage element.

Applicant's remaining arguments are a general discussion of the disclosures and are not relevant to the claims or rejections.

### ***Conclusion***

4. Claims 5 and 11 are objected to as being dependent upon a rejected base claim, but may be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
  
5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey S. Zweizig whose telephone number is (571) 272-1758. The examiner can normally be reached on Monday thru Wednesday 6:00 am to 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy P. Callahan can be reached on (571) 272-1740. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jeffrey S. Zweizig  
Primary Examiner  
Art Unit 2816

JZ